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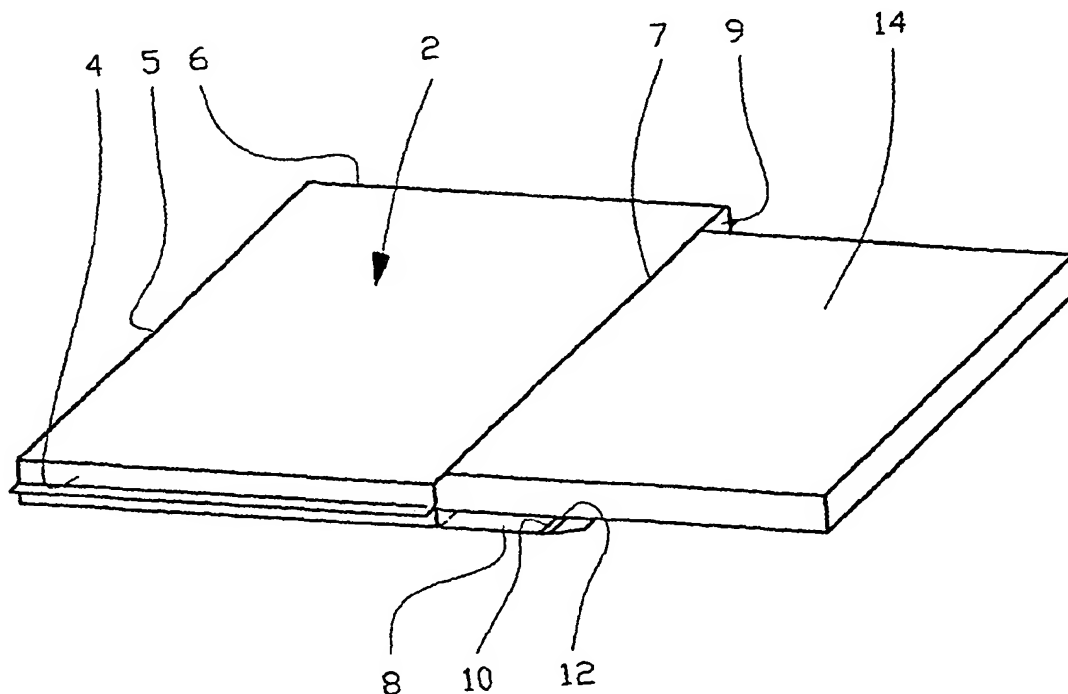
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For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: A DEVICE FOR A CARTRIDGE BAG



(57) Abstract: A device for a cartridge bag (2) of the type used as an encasing envelope for a radiographic film/image plate/raster/cartridge (14) during radiography examinations, wherein at least one surface side of the cartridge bag (2) is provided with a plurality of air/gas pockets/cushions (26).

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## A DEVICE FOR A CARTRIDGE BAG

This invention concerns a bag for encircling and enclosing a radiographic film/image plate which can be embedded in a raster screen/cartridge of the type used for bedside  
5 radiography examination, e.g. of thorax, of persons.

During radiography examination the X-ray apparatus is placed on the one side of the examination object. A radiographic film is placed on the other side when employing older techniques, or an image plate when employing newer  
10 techniques. The film/image plate is encased by a raster screen/cartridge ordinarily made of metal.

Sick and/or injured persons often must be examined while lying in bed or on a stretcher. The raster screen/cartridge is inserted underneath the patient as close to the body as  
15 possible. This implies that bare skin can come into contact with the raster screen/cartridge, thus providing a cold and hard sensation during the period of examination. Upon taking many pictures the raster screen may have to be changed several times. This continuous contact with cold and hard

metal may be perceived as an additional strain to a weak person.

Due to reasons of sanitation, the raster screen/cartridge must be cleaned/disinfected in between each patient. This  
5 implies a considerable additional work load in a busy radiography department.

Several solutions have been tried, and to some extent have been employed, in order to reduce the above-mentioned disadvantages. The oldest method consists in pulling a pillow  
10 case over the raster screen/cartridge. The patient's sensation of coldness upon contact with the plate is thus reduced, but the solution is relatively unhygienic in that bacteria can penetrate the pillow case material. Subsequently, the pillow cases must be laundered. Another  
15 method consists in encasing the raster screen/cartridge in a thin plastic film. The method is fast and hygienic but does not relieve the patient's discomfort when lying on a cold and edged object.

The objective of the invention is to remedy the negative  
20 sides of prior art.

In accordance with the invention, the objective is achieved by the features disclosed in the below-mentioned description and in the subsequent patent claims.

The raster screen/cartridge is encased by a bag composed of a  
25 plastic material wherein a surface portion between two plastic films is filled with air, e.g. so-called bubble plastic. The bag is closed alongside three of its edges, while it is open and provided with a protruding flap

- alongside the fourth edge. The flap is provided with an adhesive and is arranged to be folded over the edge in order to close the opening. Bacteria or possibly blood and other contaminated materials do not penetrate the plastic material.
- 5 The bubble plastic provides a thermal insulation effect, and the air bubbles within the plastic subdue and distribute the pressure of the patient towards the raster screen/cartridge. The patient therefore sense a high degree of comfort by using a bag according to the invention.
- 10 The bag is of the disposable type, thereby eluding cleaning expenses.

In the following, a non-limiting example of a preferred embodiment of the invention is described, which embodiment is illustrated by the accompanying drawings, wherein:

- 15 Fig. 1 displays the bag as the raster screen/cartridge is pushed into the bag;

Fig. 2 displays the bag in a closed condition; and

Fig. 3 displays in section a bubble plastic.

- On the drawings, the reference numeral 2 denotes a bag
- 20 according to the invention. The bag 2 is closed alongside edges 4, 5 and 6, while it is provided with an opening 9 alongside an edge 7. A flap 8 protrudes from the bag 2 alongside the edge 7. The flap 8 is provided with an adhesive 10 on the side facing the bag 2 when the flap 8 covers the
- 25 opening 9. Alternatively, a tear-off protective ribbon 12 is

arranged over the adhesive 10 and is arranged to cover the adhesive 10 until closure of the bag 2.

Upon applying the bag 2, a raster screen/cartridge 14 is inserted into the bag 2 through the opening 9, see fig. 1.

5 When the cartridge 14 is fully inserted, a potential protective ribbon 12 is removed prior to the flap 8 being folded over the opening 9. The adhesive 10 adheres to one side of the bag 2, see fig. 2.

10 Subsequent to completing the exposure, the flap 8 is opened, and the raster screen/cartridge 14 is pulled out, and the bag 2 is discarded.

Usually, a bubble plastic 20 is provided with one planar plastic film side 22 and one corrugated plastic film side 24. Air pockets 26 between the plastic films 22, 24 form a  
15 plurality of soft, thermally insulated "cushions" in the surface of the plastic.

The plastic films 22, 24 may be provided with a smooth or less smooth surface in order to facilitate the insertion of the raster screen/cartridge 14 underneath the patient.

20 By utilising a bag 2 according to the invention, a considerably improved hygienic condition is achieved during radiographic examinations, concurrently providing better comfort for the patient as a result of being thermally insulated and mechanically isolated from the raster  
25 screen/cartridge 14.

## C l a i m s

1. A device for a cartridge bag (2) of the type used as an encasing envelope for a radiographic film/image plate/raster/cartridge (14) during radiography examinations,  
5 c h a r a c t e r i s e d i n that at least one surface side of the cartridge bag (2) is provided with a plurality of air/gas pockets/cushions (26).
2. A device according to claim 1, c h a r a c t e r i s e d  
10 i n that the one open side (7) of the cartridge bag (2) is provided with a flap (8).
3. A device according to one or several of the aforesaid claims, c h a r a c t e r i s e d i n that the side of the flap (8) which, when closed, faces the bag (2), is provided with an adhesive (10).
- 15 4. Application of bubble plastic as an encasing envelope for a radiographic film/image plate/raster/cartridge during radiography examinations.

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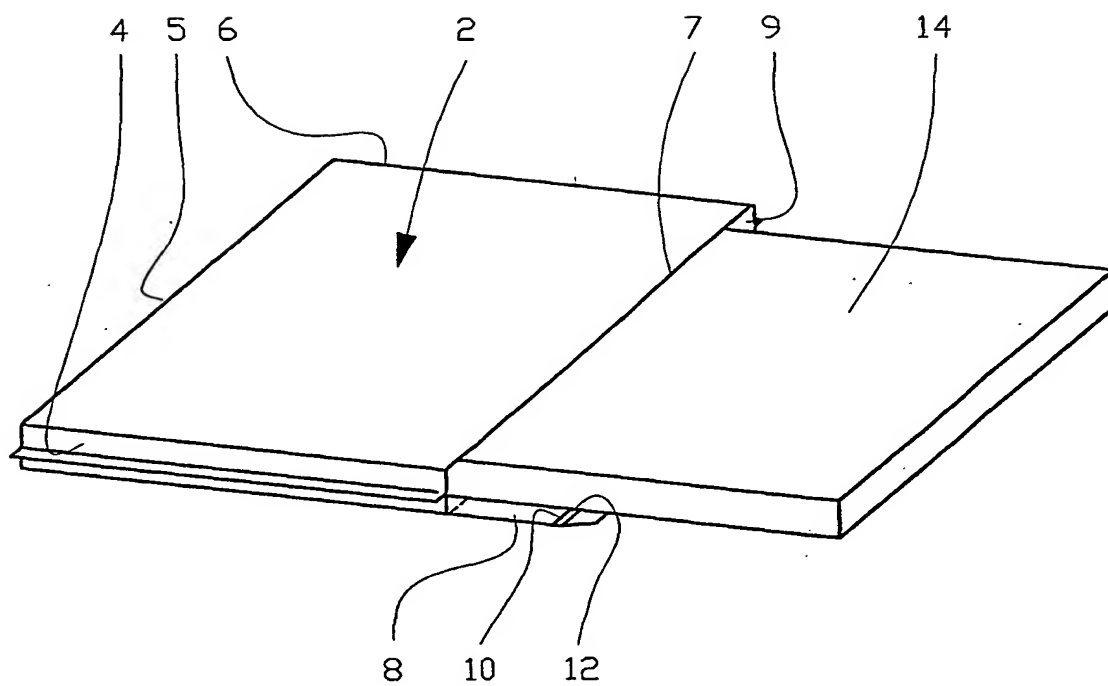


Fig. 1

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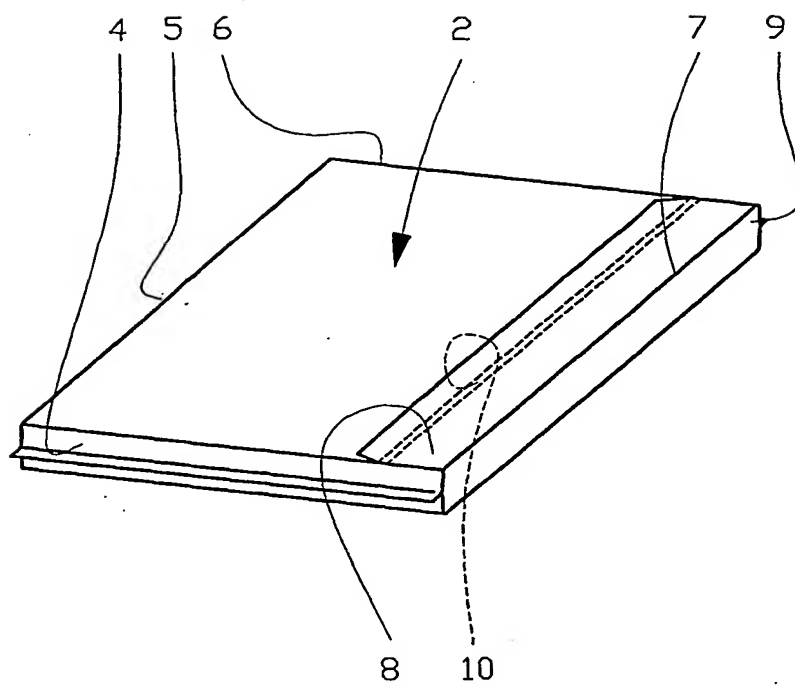


Fig. 2



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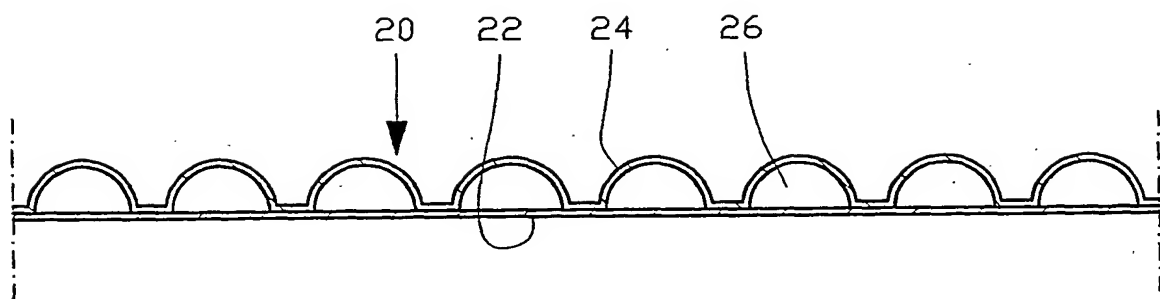


Fig. 3

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International application No.

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## A. CLASSIFICATION OF SUBJECT MATTER

IPC7: G03B 42/04

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

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Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

SE,DK,FI,NO classes as above

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5462519 A (CARVER), 31 October 1995 (31.10.95)	4
Y	--	1-3
X	US 4614000 A (MAYER), 30 Sept 1986 (30.09.86)	4
Y	--	1-3
Y	US 5185776 A (TOWNSEND), 9 February 1993 (09.02.93)	1-3
Y	US 4961502 A (GRIFFITHS), 9 October 1990 (09.10.90)	1-3

☒ Further documents are listed in the continuation of Box C.

☒ See patent family annex.

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C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>US 3392081 A (M.A. CHAVANNES), 9 July 1968 (09.07.68)</p> <p style="text-align: center;">-- -----</p>	1A4

Form PCT/ISA/210 (continuation of second sheet) (July 1998)

**INTERNATIONAL SEARCH REPORT**  
Information on patent family members

01/10/01

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Patent document cited in search report			Publication date	Patent family member(s)	Publication date
US	5462519	A	31/10/95	US 5364339 A	15/11/94
US	4614000	A	30/09/86	CA 1229685 A EP 0168975 A	24/11/87 22/01/86
US	5185776	A	09/02/93	NONE	
US	4961502	A	09/10/90	NONE	
US	3392081	A	09/07/68	BR 6350894 D CH 401457 A DE 1504090 A,B GB 1014938 A SE 313432 B US 3285793 A	00/00/00 31/10/65 06/03/69 31/12/65 11/08/69 15/11/66

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